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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/830,173	04/22/2004	Chul-Hwan Kim	DPI-12 (HY-03-1)	8107
40256	7590	04/24/2006	EXAMINER	
FERRELLS, PLLC P. O. BOX 312 CLIFTON, VA 20124-1706			GOODROW, JOHN L	
			ART UNIT	PAPER NUMBER
			1756	

DATE MAILED: 04/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/830,173

Applicant(s)

KIM ET AL.

Examiner

John L. Goodrow

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/04</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Axelsson et al [4837107] in view of Sawai et al [4254201] and Matsumura et al [6416918].

Applicants' claims are to a toner with a discrete colorant powder affixed to a core toner particle. Applicants have a ratio of volume average diameter, weight fraction and density of the colorant powder particles however applicants do not have the size or weight or density of the powders or particles. Applicants' specification has size range of from 3-12 microns note page 16. Axelsson et al teaches the core shell type toner with a size range of 2-50 microns note the abstract. The shell contains the colorant note Col. 8 and the size of the colorant pigment is from 0.01- 0.1 $\mu$ m note lines 35-55. The use of pigment powders in the toner are taught by Sawai et al in which the pigment powders are deposited on the surfaces of the encapsulated toner particles. Various pigments are taught in Col.4 lines 55-69. Matsumura et al teaches a toner with small pigment powders on the toner particle note Col. 8 lines 1-5. Flow agents to improve the

transferring properties are added note Col. 6 lines 20-30. Release agents are taught as waxes Col. 6 line 60-65 and Col. 12 line 40-50. Various charge control agents can be used note Col.13 lines 10-15. It would be obvious to one of ordinary skill in the art at the time of applicants' invention with a reasonable expectation of success to use the known additives to the toner composition having a toner particle with a colorant powder shell to improve the physical properties of the toner composition.

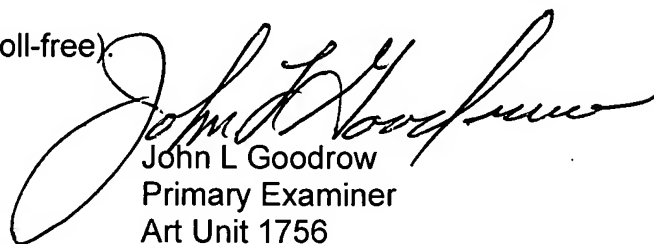
Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Axelsson et al in view of Matsumura et al. Applicants claims a method of producing a toner by admixing a toner core and dispersing a powder colorant over the surface of the toner core. Axelsson et al teaches the preparation of a shell note Col.7 on mono dispersed base particles. The size of the powder can be from 70-250nm as taught by Matsumura et al. The size of the core to shell can have various ratios, as can the densities depending upon the polymers used as binders. It would be obvious to one of ordinary skill in the art at the time of applicants' invention with a reasonable expectation of success to have the powders and particles within a large range of ratios that are admixed and dispersed to form a toner composition.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John L. Goodrow whose telephone number is 571-272-1384. The examiner can normally be reached on Monday -Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark F. Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John L. Goodrow  
Primary Examiner  
Art Unit 1756

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